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## The role of oxidized lipoproteins in atherogenesis.

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This article reviews our current understanding of the mechanisms of low-density lipoprotein (LDL) oxidation and the potential role of oxidized lipoproteins in atherosclerosis. Studies in hypercholesterolemic animal models indicate that oxidation of LDL is likely to play an important role in atherogenesis. Epidemiological investigations further suggest that the dietary intake of antioxidants is inversely associated with the risk of vascular disease, suggesting that oxidized LDL may be important in human atherosclerosis. By activating inflammatory events, oxidized lipoproteins may contribute to all stages of the atherosclerotic process. Lipoprotein oxidation is promoted by several different systems in vitro, including free and protein-bound metal ions, thiols, reactive oxygen intermediates, lipoxygenase, peroxynitrite, and myeloperoxidase. Intracellular proteins that bind iron or regulate iron metabolism might also play an important role. The physiologically relevant pathways have yet to be identified, however. We assess recent findings on the effects of antioxidants in vivo and suggest potential strategies for inhibiting oxidation in the vessel wall.

### Publication Types:

- Review
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